



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,125	07/23/2003	Nathaniel T. Becker	GC761-6	9520

7590 09/21/2006

JANET KAISER CASTANEDA
GENENCOR INTERNATIONAL, INC.
925 PAGE MILL ROAD
PALO ALTO, CA 94304-1013

EXAMINER

HANLEY, SUSAN MARIE

ART UNIT	PAPER NUMBER
----------	--------------

1651

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/626,125	Applicant(s) BECKER ET AL.	
	Examiner Susan Hanley	Art Unit 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 0530.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-36 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1651

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of proteases (the enzyme specie) and PEO (the polymer specie) in the reply filed on 5/10/06 is acknowledged. The traversal is on the ground(s) that there is no search burden to the Examiner and that the polymer species and the enzyme species are disclosed as being used together, respectively. This is found persuasive and the restriction requirement is withdrawn.

Claims 1-36 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20, 23, 30, 34 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 4, 12, 17, 23, 30, 34 and 36 are rejected as indefinite because the claimed molecular weight values lack a unit such as Daltons.

Claims 1 and 17 are rejected because the phrase "said polymer acts as an anti-misting agent" is vague and indefinite. It is suggested that "acts" be changed to "is" to clarify that the anti-misting effect is an inherent property of the polymer. Claims 2-11 and 18-20 are rejected as depending from rejected claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 1651

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 4, 7, 9 and 12-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sramek (US 5,068,099).

Sramek discloses a composition for personal care, an aerosol hairspray, having a reduced volatile organic emission during the useful life of the package. The hair spray composition comprises a combination of at least two polymers which have average molecular weights of at least 100,000. The droplet size of the atomized hair spray is 60 ± 12 microns or 73 ± 13 microns, depending on the package size (abstract). The polymer can be a mono- or copolymer comprising monomers such as acrylamide, acrylate (col. 9, lines 55-68 to col. 10, lines 1-10), or a polyvinylpyrrolidone (col. 10, lines 28-40). Some examples of the molecular weights of the polymers are 1,000,000 Daltons (col. 10, lines 60-61) or 1,800,000 Daltons (col. 12, lines 55-56). This disclosure meets the limitations of instant claims because the disclosed compositions comprises a reduced aerosol composition having a polymer with a molecule weight that overlaps the claimed molecular weight range, wherein the product is for personal care. Although Sramek does not specifically disclose the anti-misting reduction of the polymer-formulated composition compared to the nonpolymeric-formulated composition, this property is considered to be inherent because the disclosed reduced aerosol compositions of Sramek possess the claimed components. It is noted that In re Best (195 USPQ 430) and In re Fitzgerald (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter shown to be in the prior art does not possess characteristic relied on" (205 USPQ 594, second column, first full paragraph).

Art Unit: 1651

Claims 1-6, 10, 12, 13, 15-19, 30, and 33-36 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Aubay et al. (US 6,593,288; "Aubay").

Aubay discloses a water-soluble or water dispersible quaternary ammonium copolymer that is polymerizable with other monomers that are ethylenically unsaturated that provides a composition for cleaning hard surfaces (abstract). The composition can also comprise detergent enzymes, dyes, optical brighteners, freezing-thawing stabilizers, bleaching agents, etc. (col. 12, lines 46-54) which make the composition suitable for detergent washing (col. 11, lines 34-36). The hydrophilic property of the disclosed polymers reduces the formation of mist on surfaces (col. 3, lines 35-38). The co-polymer can be a (meth)acrylic acid, a (meth)acrylate (see examples from col. 3, lines 66-67 to col. 4, lines 1-15), a vinyl alcohol or an ethylene glycol (col. 4, lines 14-21). The molecular weight of the copolymers is at least 1,000 Da, at least 10,000 Da, at least 10,000,000 Da up to 20,000,000 Da.

This disclosure meets the limitations of instant claims because the disclosed compositions have reduced misting and comprises a polymer(s) with a molecule weight that overlaps the claimed molecular weight range, wherein the product is for personal care, cleaning or a detergent. Although Aubay does not specifically disclose the anti-misting reduction of the polymer-formulated composition compared to the nonpolymeric-formulated composition, this property is considered to be inherent because the disclosed reduced misting compositions of Aubay possess the claimed components. Furthermore, Aubay does not specifically disclose a shower or bath gel. However, Aubay's composition has the claimed components and is suitable for use on human skin since it can be used for hand dishwashing (col. 9, line 31). It is noted that *In re Best* (195 USPQ 430) and *In re Fitzgerald* (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter shown to be in the prior art does not possess characteristic relied on" (205 USPQ 594, second column, first full paragraph).

Art Unit: 1651

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 and 10-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aubay et al. (US 6,593,288; "Aubay") in view of Cho et al. (US 6,835,703; "Cho").

The disclosure of Aubay is discussed supra.

Aubay does not disclose the type of enzyme present in a detergent, propylene glycol enzyme stabilizer, the proportions of the enzymes in a detergent composition or the specific method of making a detergent/polymer composition at 35 degrees C.

Cho discloses that proteases (col. 2, lines 59-63) and amylases (col. 5, lines 1-18) are common enzymes in enzyme-containing detergents. These enzymes are usually make up from 0.01% to about 10.0% of the weight of the detergent (col. 2, lines 55-58). Propylene glycol is used as an enzyme stabilizer (col. 3, lines 41-45). Cho discloses methods of preparing enzyme-containing detergents. Cho advises that polymers that comprise thickeners should be dispersed in a non-aqueous ingredient prior to combining it with an enzyme to ensure better dispersal and mixing with the enzyme (col. 8, lines 59-64). A thickener is

Art Unit: 1651

a high molecular weight polymer such as Carbopol ® (col. 5, lines 19-31). Cho discloses that the mixing of the composition can be done at a temperature of about 30 degrees or less (col. 13, lines 14-17). This disclosure meets the limitations of "at about 35 degrees C" in instant claim 32 because, in the absence of a definition, "about" is interpreted to mean ± 5 degrees.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ an amylase or protease at the claimed concentrations in the detergent composition of Aubay, wherein the enzyme is stabilized by propylene glycol, or the order of adding the high molecular weight polymer to the enzyme. The ordinary artisan would have been motivated to employ the enzymes at the recommended concentrations and enzyme-stabilizers in the composition and method of Aubay because the employment of amylases and proteases at the given concentrations and the use of enzyme stabilizers in detergent compositions is well known in the art. Hence, the selection of appropriate detergent enzymes, concentrations thereof and enzymes stabilizers would have been a routine matter of selection by the ordinary artisan.

The ordinary artisan would have been motivated to dissolve a very high molecular weight polymer disclosed by Aubay in a non-aqueous solvent before combining it with the enzyme because very high molecular weight polymers, like thickeners, are viscous and do not mix easily. Hence the ordinary artisan would have realized the advantage of dispersing a viscous polymer in a non-aqueous solvent to enhance mixing with an enzyme in an aqueous composition. The ordinary artisan would have had a reasonable expectation that the dispersal of the very high molecular weight polymers taught by Aubay in a non-aqueous solvent would be successful because said polymers taught by Aubay are, like thickeners, viscous materials.

No claim is allowed.

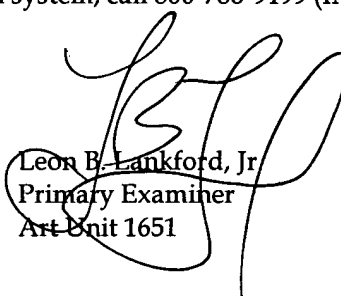
Art Unit: 1651

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Hanley whose telephone number is 571-272-2508. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Susan Hanley
Patent Examiner
AU 1651



Leon B. Lankford, Jr.
Primary Examiner
Art Unit 1651